

PATENT

Atty Docket No.: 200313156-1

App. Ser. No.: 10/673,134

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks. Claims 1-15 and 17-32 are pending in the present application of which claims 1, 6, 15, and 27 are independent. Claims 1, 6, 15, and 27 are amended herein.

Claim 6 is objected to as including allowable subject matter but being dependent on a rejected base claim. Claim 6 has been amended herein as an independent claim, in accordance with the Examiner's suggestion.

Claims 1-5, 7-15, and 17-32 were rejected under 35 U.S.C. § 103(a) as being anticipated by Wareham et al. (U.S. Patent Application Number 2004/0075343) (referred to as Wareham) in view of Begun et al (2003/0055969) (referred to as Begun).

The above rejections are respectfully traversed for at least the reasons set forth below.

Applicant Initiated Interview

The Applicants wishes to thank Examiner Bhat for the courtesies extended during the personal interview conducted on March 28, 2006. During the interview, independent claims 1, 15, and 27 and the Wareham and Begun references, were discussed. The Applicants' representative remarked that the references were not combinable for the reasons discussed below, and that the references failed to teach several features, which have been added to the independent claims 1, 15 and 27 in the amendments herein. The Examiner indicated that the proposed amendment appeared to distinguish claims 1, 15 and 27 from the prior art, but no definitive agreement was reached.

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Claim Rejection Under 35 U.S.C. §103

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in MPEP § 706.02(j):

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vacc*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Therefore, if the above-identified criteria are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

Claims 1-5, 7-15, and 17-32 were rejected under 35 U.S.C. § 103(a) as being anticipated by Wareham in view of Begun.

The combination of Wareham and Begun fails to teach or suggest the features of independent claims 1, 15, and 27. Specifically, Wareham and Begun either alone or in combination, fails to teach "controlling load demand...to be equal to...the load demand on at least one other functioning power system component...wherein load demand includes a percentage of electric current drawn by the at least one power system component." Support for the amendments to independent claims 1, 15 and 27 may be found on pages 6-7 lines 23-12.

Wareham discloses a system for power load management in a house or building. The system discloses a single power supplier, either a service power connection or an alternate

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power source, supplying power through an electrical distribution panel. The system also includes load control switches for controlling the load supplied by the electrical distribution panel. Wareham's disclosure is directed to controlling the load through the electrical distribution panel in order to ensure that an over current condition is not imposed on the alternate power source or the power service connection. The Office Action concedes that Wareham fails to disclose any component or method for balancing loads between two or more power system components.

In an effort to overcome the deficiencies of Wareham, the Office Action alleges that Begun teaches dividing the total load demand equally among a plurality of power systems in order to insure that the power system demands are balanced. However, as discussed during the interview, Begun discloses balancing workload, i.e. processing tasks, in a computer networking environment. As such, Begun does not teach balancing power or electric current, but only discloses balancing processing workload between servers. Thus, the workload of Begun is completely different from the load demand of claims 1, 15, and 27, because load demand of the claims refers to power or electric current, while workload of Begun refers to processing tasks performed by servers. Independent claims 1, 15, and 27 have been amended to clarify that load demand includes a percentage of electric current drawn by the at least one power system component. Therefore, Begun fails to rectify the acknowledged deficiencies of Wareham, because Begun fails to teach controlling the load demand to be equal to the load demand on the at least one other functioning power system component.

Moreover, Wareham and Begun are not properly combinable because they are non-analogous art. The MPEP states that "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicants endeavor or,

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if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993); and *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1069, 68 USPQ2d 1481, 1490 (Fed. Cir. 2003). (See MPEP 2141.01(a)).

Here, Wareham and Begun are clearly not in the same field of Applicant's endeavor and Begun and Wareham are not pertinent to the particular problem with which the inventor was concerned. According to certain embodiments described in the Applicants' specification, the load demand is rebalanced on redundant components to avoid overloading a redundant component and to avoid power outages to computing components. In contrast, Wareham is concerned with conserving power usage in a house or building and Begun is concerned with distributing processing tasks in a computer system. Therefore, neither Wareham or Begun are directly related to the embodiment described in the Applicants' specification.

Similarly, Wareham is clearly not in the same field of endeavor as Begun, nor is Wareham pertinent to the same problem with which Begun was concerned. Wareham is concerned with conserving power usage in a house or building. Wareham's system involves selectively turning on and off switches in a house when certain areas of the house do not require power. Begun, on the other hand, addresses the problem of distributing processor tasks in a network of computer components. Begun has no relevance, whatsoever, to controlling the power to components in a house or building. The only remote commonality

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between the two references is that they both use electrical power to drive their respective components.

The holding in *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993) is also pertinent to the combination of references. Wang involved claims directed to single in-line memory modules (SIMMs) for installation on a printed circuit motherboard for use in personal computers. The court held that reference to a SIMM for an industrial controller was not necessarily in the same field of endeavor as the claimed subject matter merely because it related to memories. The reference was found to be in a different field of endeavor because it involved memory circuits in which modules of varying sizes may be added or replaced, whereas the claimed invention involved compact modular memories. Furthermore, since memory modules of the claims at issue were intended for personal computers and used dynamic random-access-memories, whereas a reference SIMM was developed for use in large industrial machine controllers and only taught the use of static random-access-memories or read-only-memories. Here, the proposed rejection in the Office Action is analogous to *Wang*, because the Office Action asserts that the two references are analogous because they are from similar technology relating to systems that require electrical power. Therefore, just as the *Wang* court ruled that two references cannot be considered analogous just because they are both related to memories, the two references cited in the Office Action cannot be considered analogous just because they both involve the use of electrical power.

It is important that the references be analogous because the MPEP further requires that "in determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to

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be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Thus, an obviousness rejection requires a showing that a person having ordinary skill in the art would have both references before him. Here, a person having ordinary skill in the art would not have both Wareham and Begun before him, because they are non-analogous art and the skilled artisan would not have looked to Begun to modify Wareham.

In addition, there is no expectation of success in combining the references. "The prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. Obviousness does not require absolute predictability, however, at least some degree of predictability is required. Evidence showing there was no reasonable expectation of success may support a conclusion of nonobviousness. See *MPEP* 2143.02, *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976).

Here, Begun discloses redistributing processing tasks amongst different servers. However, Wareham does not teach the use of servers or processing information. Therefore, the teaching cited in Begun could not be used in the invention of Wareham.

Moreover, even if the skilled artisan desired to balance the power load in Wareham, it would not be possible under Wareham's system. Wareham uses a series of mechanical switches to turn power on and off. These switches do not allow power to be rebalanced between the various switches, because the switches have only an on/off capability, and lack the capability to balance various gradations of power between them. See paragraph 42 of

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Wareham. Therefore, even if the references were combinable, it is not possible to modify the system of Wareham as the Office Action proposes.

Accordingly, Applicants respectfully submit that the features of claims 1, 15, and 27 are not rendered obvious by the proposed combination of Wareham and Begun. The Examiner is therefore respectfully requested to withdraw the rejection of independent claims 1, 15, 27, and the claims that depend therefrom, and to allow these claims.

In addition, Independent claim 15 recites,

a load manager calculating loads demands to be placed on the first set of components based on a load balancing scheme wherein load demands include a percentage of electric current drawn by the first set of components; and controlling load demands on the first set of the power system components to be equal to the calculated load demands.

Wareham fails to teach determining a new load to be placed on the power system component. No determination of on an amount of load to be placed on a power system component is taught. Furthermore, Wareham fails to teach or suggest calculating load demands as described above. As set forth above, Begun fails to remedy the deficiencies of Wareham.

Independent claim 27 recites,

means for calculating new load demands to be placed on the plurality of power system components in response to determining the load demands need to be varied, wherein load demand includes a percentage of electric current drawn by the at least one power system component; and

means for controlling the load demands on the plurality of power system components to be equal to the calculated new load demands such that the new load demands on the plurality of power system components are balanced.

As described above, Wareham fails to teach means for calculating load demands to be placed on a plurality of power system components. No calculating is performed in Wareham.

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Instead, Wareham appears to disclose simply shedding loads, such as removing power to a load rather than calculating a new load to be placed on a power system component. As set forth above, Begun fails to remedy the deficiencies of Wareham.

For at least these reasons, claims 1-15 and 17-32 are believed to be allowable.

Furthermore, in addition to Wareham failing to teach or suggest many of the features of independent claims 1, 15 and 27, Wareham and Begun fail to teach or suggest many features of the dependent claims.

Claim 3 recites, "dividing the total load demand equally among the plurality of power system components." This feature is not taught or suggested by Wareham or Begun.

Claim 7 recites, "determining whether a request to change the load demand of the at least one power system component is received." Claim 8 recites a maintenance-related request. No requests to change a load demand are received in Wareham or Begun.

Claim 9 recites determining new load demands ... in response to load demands being unbalanced. Wareham discloses shedding loads to ensure that an over current condition is not imposed on the alternate power source or the power service connection. Determining whether an over current condition occurs is not the same as determining whether load demands are unbalanced. An over current condition may still occur if load demands are balanced, for example, if the total load demand exceeds the capacity of the power source.

The data center in claim 13 is not taught by Wareham. While Begun discloses the use of computing equipment, Begun fails to teach a data center.

Claim 17 recites, "modeling the power system in different failure states." This is similar to claim 6 which was objected to as including allowable subject matter. Accordingly, claim 17 is also believed to be allowable.

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Claim 21 recites, "the fast transfer load transfer device controlling load demand on the one power system component in response to detecting an over loading on the one power system component." Claim 30 recites "fast load transfer means". These features are also not taught by Wareham or Begun.

Claim 31 recites a first set of power system components and second set of power system components receiving power from the first set of power system components. The load demand manager is operable to send control data to both the first and second set of power system components to control the load demands on the respective set of power set components. This feature is not taught by either Wareham or Begun.

According to an embodiment described in the Applicants' specification, a grid power system, such as shown in figure 1 of the Applicants' specification, includes sets of components at different levels, such as UPSs, PDUs, and systems provided at different levels. The load manager is operable to send control data to components on multiple levels to control load demands. Wareham and Begun fail to teach this feature. Wareham discloses an electrical distribution panel connected to a load management controller but fails to teach sending control data to components in different levels of a grid, which may include a first set of power system components and second set of power system components receiving power from the first set of power system components.

Claim 32 recites, "determining a total load demand on the first set of components; and dividing the total load demand equally among the first set of components." As described above, Wareham and Begun fail to teach or suggest a load balancing scheme where the total load demand is divided equally among components.

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Conclusion

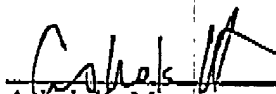
In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to deposit account no. 08-2025.

Respectfully submitted,

Dated: March 30, 2006

By


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